R E P O R T R E S U M E S

ED 019 830 EF 001 661

SOUTHSIDE ELEMENTARY SCHOOL EDUCATIONAL SPECIFICATIONS.

BY- RUSHTON, EDWARD W.
CHARLOTTESVILLE PUBLIC SCHOOLS, VA.

PUB DATE MAY 67

EDRS PRICE MF-$0.25 HC-$2.32 56P.

DESCRIPTORS- *EDUCATIONAL SPECIFICATIONS, *ELEMENTARY SCHOOLS, *ENVIRONMENTAL CRITERIA, *SCHOOL CONSTRUCTION, *STATE STANDARDS, BUILDING EQUIPMENT, CONTROLLED ENVIRONMENT, EDUCATIONAL PROGRAMS, LEARNING ACTIVITIES, SCHOOL DESIGN, SPECIAL EDUCATION, STUDENT NEEDS,

IN PLANNING FOR THE CONSTRUCTION OF A NEW ELEMENTARY SCHOOL, A GROUP OF TEACHERS AND ADMINISTRATORS IN THE SCHOOL DISTRICT FORMULATED A SET OF EDUCATIONAL SPECIFICATIONS AS A GUIDE FOR THE SCHOOL BOARD'S DELIBERATION IN DETERMINING THE CHARACTER AND QUALITY OF EDUCATION FOR CHILDREN IN AN ELEMENTARY SCHOOL. THE PRESENTATION INCLUDED--(1) A DESCRIPTION OF THE LEARNER, THE PURPOSE OF THE PROGRAM, AND ACTIVITIES AND FACILITIES FOR KINDERGARTEN, PRIMARY, AND UPPER ELEMENTARY PROGRAMS, (2) ADMINISTRATIVE AREAS REQUIRED, (3) A DESCRIPTION OF GENERAL FACILITIES, INCLUDING EQUIPMENT AND ENVIRONMENT, AND (4) FACILITIES FOR SPECIAL EDUCATION. RECOMMENDATIONS INCLUDE SPACES TO BE PROVIDED, MATERIALS AND STORAGE, TYPES OF EQUIPMENT, AND GENERAL ENVIRONMENTAL CRITERIA. (MM)

ED019830

CHARLOTTESVILLE PUBLIC SCHOOLS

SOUTHSIDE ELEMENTARY SCHOOL

EDUCATIONAL SPECIFICATIONS

DR. EDWARD W. RUSHTON
SUPERINTENDENT

MAY 1967

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

EA 001 667

Charlottesville Public Schools
Charlottesville, Virginia

LETTER OF TRANSMITTAL

This report was prepared at the request of the School Board of the City of Charlottesville. It is presented as a guide for the School Board's deliberation in determining the character and quality of education for children in an elementary school.

I am grateful to the teachers, the principals, the speacialist in school plant planning, and the administrative assistant who labored diligently and efficiently in making this study. In my opinion this report reflects a high level of thinking, planning, and research. It reflects also a depth and breadth of knowledge and understanding of the needs of children today and for many years in the future.

It is with pleasure and pride that I transmit this educational plan to the School Board as the first step in the building of a modern and excellent school plant for our children.

Edward W. Rushton
Superintendent

May 1967

EDITORIAL COMMITTEE

Miss Ethel L. Joyner
Supervisor of Libraries

S. Scott Hamrick, Principal
Clark Elementary School

Dr. George W. Holmes, III
Professor of Education
University of Virginia
Consultant

Booker Reaves
Administrative Assistant
Co-ordinator

TABLE OF CONTENTS

Page

Acknowledgment

Foreword

Introduction. 1

General Recommendations 3

Kindergarten Report 5

The Nature of the Kindergarten Learner 5

Goals for a Good Kindergarten Program 6

Activities and Facilities Required 7

Primary Program 8

The Nature of the Primary Learner 8

Purpose of the Program 10

Activities and Facilities 10

Summary 11

Upper Elementary. 12

Nature of the Upper Elementary Learner 12

Purposé of the Program 14

Activities and Facilities Required 16

Administrative Area 20

Reception Space 21

Secretarial Work Space 22

Principal's Office 22

Assistant Principal's Office 23

Clinic 23

Offices for Guidance and Psychological Services 23

Conference Room 24

Toilets. 24

Outside Telephones and Inter-communication System. 24
General Facilities 24
Food Service 24
Auditorium 26
Physical Education Space 27
The Library 28
Access and Parking 29
Furnishings 30
Lighting and Color 31
Thermal Environment 31
Accoustical Environment 32
Storage 32
Central Storeroom for Books 32
Storerooms for Instructional Materials 32
Custodial Storage 33
Teachers' Lounge 33
Resource Room 33-A
Teachers' Toilets 34
Drinking Fountains 34
Plumbing for Instructional Areas 34
Pupil Toilet Rooms 34
Miscellaneous Interior Provisions 35
Bell System 35
Fire Protection 35
Protection from Vandalism 36
Hose Connections 36
Flagpole 36
Floors 36
Educational Television 36

Electrical Service 37

Clocks 37

Pay-Telephone 37

Special Education 37

Special Education for the Educable Child 37

Summary Plan Considerations. 41

Design Considerations 41

Summary 43

ACKNOWLEDGMENTS

A report such as this is made possible only through the cooperation of many people. During the past six weeks in which this publication was in preparation, many parents, teachers and educators were actively involved in its planning.

Dr. George W. Holmes, III, Professor of Education, University of Virginia, and School Planning Consultant, spent many hours in committee work. He contributed his advice and criticism in the preparation of this report in a pleasing and untiring manner. Without his services this report would have been an impossible task in the time available for preparation.

For assistance with the Special Education section of this report, specific acknowledgment is due the following: Dr. Leonard Curtis and Dr. John Mesinger, School of Education, University of Virginia, and Mr. Sandy Lambert, member of Albemarle Charlottesville Association for Retarded Children.

Charlottesville School Personnel working in the designated areas were:

Kindergarten

Mrs. Diane Niehaus - Greenbrier
Mrs. Carolyn Gaines - Clark
Miss Marion Trevillian - Venable

Primary

Mrs. Clara May - Greenbrier
Miss Maria Tripolos - Burnley-Moran
Mrs. Marion Aberle - Johnson
Mrs. Joan Bennett - Johnson

UPPER ELEMENTARY

Mrs. Shirley Hart - Jefferson
Mrs. Kathleen Bradley - Brunley-Moran

Administrative

Mr. S. Scott Hamrick - Clark
Miss Jerry White - Clark
Mr. Charles Strauss - Jefferson

General Facilities

Mr. Jimmie J. Dunbar - Venable
Miss Ethel Leigh Joyner - Supervisor of Libraries
Mrs. Lilieth Meadows - Venable

Special Education

Mr. Guy A. Dirom - McGuffey
Mrs. Viola Wingfield - McGuffey
Mrs. Marion Clark - McGuffey
Mrs. Wanda B. Elder - McGuffey

To all of these and last, but not least, to our Central Office Staff, we are most grateful.

Booker Reaves
Administrative Assistant
Coordinator of School Planning
Committee

FOREWORD

American Public Education is changing in content and method with each succeeding generation of pupils. Not only must teachers be able to change and adjust to meet the changing demands placed upon the educational program, but the building which houses the program must change too. Flexibility has come to be the key to achieving the full utilization of evolving teaching concepts.

Schools should be built for children. The design, size and arrangement of buildings and sites must be such that they contribute to the educational process. When pupils were expected to sit at desks for long periods of time to study and to recite by rote, school architecture was formal and unimaginative. Examples of such buildings may be found in almost every American community. The formality and coldness of those buildings has a tendency to repress the natural exuberance of children and thereby to create a sense of discomfort which inhibits the learning process. Dingy halls and bleak classrooms have a negative effect on the learning process.

Most parents, teachers and child psychologists recognize that at different levels of maturity the child has different interest and that his attention span varies. School buildings should be designed to take advantage of the natural characteristics of children as they grow and develop. It should be possible for the various elements of the building to be expanded or contracted as the need arises.

It should be recognized that changes in educational programs and in instructional methods usually come through the process of evolution rather than revolution. In spite of the decided trend away from the self-contained classroom, there probably always will be situations in which children will be taught in groups of traditional classroom size. Thus,

it should be possible to divide the space within a school building to meet this need as well as the need for larger and smaller groups.

As each child enters elementary school he brings with him the influence of his home background. He may be inhibited by lack of experience but he possesses capabilities which must be discovered, nurtured and developed. The school should meet this challenge by providing the theoretical and practical experiences to help him realize his maximum potential as an individual preparing for the goal of becoming a participating member of society.

Educational Specifications

INTRODUCTION

Elementary education in Charlottesville is in a period of change. What once was a traditional, self-contained classroom organization has been changed to incorporate many elements of the ungraded school at the primary level. The change at the upper elementary level has been in the direction of semi-departmentalization and the provision of subject matter specialists in certain areas. Whether or not these changes will continue in the directions now indicated is a question that cannot and need not be answered at this time. The important consideration is the established fact that elementary education is changing and will continue to change. This is not to say that the direction of change is unimportant. Indeed, at a given time the direction of change may be the most important element in the elementary school program. The important point to be emphasized is that the plant which houses the elementary school program should be designed so that change can take place.

The traditional elementary school plant has been designed for the self-contained classroom approach to elementary education. This means that the traditional building is composed of a number of classrooms, each designed to accommodate one teacher and approximately thirty pupils. This type of building serves well so long as the entire program is organized around the self-contained classroom. Unfortunately, this type of building does not lend itself readily to changes in organization, teaching methods and grouping of pupils. While it is true that some changes in program can be made in spite of the building, there appears to be a natural tendency to use such a building the way it was designed

to be used. In other words, the building often "gets in the way" of desired change. Of course, if unlimited funds were available, the physical structure might be altered to make way for changing programs. The alteration of physical plants is at best an expensive and time-consuming process. Therefore, it often does not appear "practical" to remodel an existing structure to permit desired changes in program and organization.

Perhaps the first major criterion for the new elementary plant to be constructed in Charlottesville is that the plant should lend itself to change. It is entirely possible that the original organization of the school will be similar, in many respects, to the self-contained classroom organization now used in the existing schools. Nevertheless, the trend toward the ungraded organization, especially at the primary level, indicates that it should be possible to move in that direction without the necessity for structural alteration of the plant. Indications are that the traditional grouping of 25 pupils with one teacher will be used at times, but at other times certain instruction may be provided to groups of 50 to 75 pupils by one, two, or three teachers. Individual instruction will be provided for some pupils during certain parts of the day, and individual pupils and small groups may instruct themselves without the direct aid of a teacher for limited periods of time.

At the time this report was prepared, definite decisions had not been made concerning the grades to be housed at the new plant and the total capacity of the plant. It, therefore, was considered best to prepare the report on the basis of the program considered desirable for K-6 elementary school and on the assumption that, initially, there probably

would be at least two sections of each grade including kindergarten. It was assumed further that at least two classes of educable retarded pupils would be housed at the new plant. It was recognized that before the building could be designed definite decisions would have to be reached concerning these matters, but the committee was of the opinion that the report could be adjusted to fit those decisions. If, for example, it should be decided that the plant would house grades K-4 instead of grades K-6, it would be relatively simple to omit consideration of facilities described for grades 5 and 6. If it should be decided that all educable mentally retarded pupils will remain at McGuffey School, the facilities for those pupils could be omitted from the plans. In other words, in the absence of definite information as to plant capacity and the grades to be housed, the planning committee tried to develop a report which had the same characteristic of flexibility which was suggested for the new plant.

GENERAL RECOMMENDATIONS

Based on a study of the existing elementary school plants the committee agreed on the following general recommendations for any new elementary school construction.

1. Careful attention should be given to zoning the building for quiet and noisy activities.
2. Classrooms should be of sufficient size to accommodate an activity type of program in which children are grouped and re-grouped for various parts of the educational program.

3. A door leading directly from each classroom to the outdoors is a valuable educational asset.

4. Every classroom should be equipped with a sink and a drinking fountain.

5. Ease of cleaning should be one of the primary considerations in choosing the material used for classroom floors.

6. Special attention should be given to providing adequate and convenient, well-ventilated storage for children's wraps. It was suggested that consideration be given to a closet-type of arrangement. In any arrangement, separate compartments should be provided for each child's wraps.

7. A teacher's closet should be provided in each classroom. These closets should be large enough for the storage of classroom teaching materials. Space should be provided for the teacher's wraps. The closet door should be equipped with a lock.

8. Decentralized storage should be provided for books and a supply of teaching materials. For example, primary level books and materials should be stored in the primary area of the building.

9. Conference rooms, perhaps between classrooms, are desirable.

10. A great amount of display space is desirable. The typical bulletin boards and strips of tack board above the chalkboards are not the most desirable facilities for the elementary school. Display areas should be attractive in and of themselves so that they do not necessarily "look bare" when displays are not available.

11. It is recommended that the auditorium and the space for physical education be planned as separate facilities.

12. Outdoor all-weather play areas should be provided.

13. A site should be planned for use in the educational program. A wooded area on the site is desirable.

14. Large gang toilets should be avoided.

15. Teachers' restrooms should be convenient to every classroom.

16. The central office should be located for convenient access by the public, teacher and pupils.

17. An intercommunication system is needed.

18. A special room for music and a special room for art should be provided.

19. A resource room should be provided.

20. Glare-free lighting is absolutely essential for the entire building.

21. Air-conditioning is recommended.

22. The general atmosphere of the plant, both inside and outside, should be pleasant and inviting.

23. Corridors should be designed for good traffic flow and the control of noise.

KINDERGARTEN REPORT

THE NATURE OF THE KINDERGARTEN LEARNER

Socially, the five-year old learner is beginning to outgrow his self-centeredness. He is gradually learning to relate to other children and adults. He is learning to help others-to share his ideas and toys. He is interested in pleasing others and is experimenting to determine what is socially acceptable.

Physically, the kindergartner is active, and seldom stops for rest between activities. He is learning and improving many motor skills, such as running, jumping, climbing, and skipping. He needs to develop muscle coordination by pounding, sawing, hammering, and other similar activities. He is also learning to tie his shoes, button, and zip.

Mentally and intellectually, the five-year old child is becoming aware of shapes, colors, and numbers. He needs concrete objects and many firsthand experiences to help extend his learning in his natural and physical surroundings. He has a high degree of interest in many things and a short attention span in practically all activities. He

is intrigued with fantasy and make-believe. He loves to imitate members of his family, as well as other adults. Role playing is essential in the development of his understanding of other people. He also needs to deepen his self-understanding and develop a worthwhile self-image.

GOALS FOR A GOOD KINDERGARTEN PROGRAM

The kindergarten program is basically a readiness program in which the child is prepared socially, physically, mentally and intellectually for future learning. The kindergarten curriculum should foster independent thinking, encourage creativity and self-expression, and provide for varied abilities and individual differences of children.

Socially, the goals for a good kindergarten should include learning to speak politely to others, communicating ideas, sharing toys, using correct table manners, developing good personal habits, and being considerate of others.

In terms of physical development the kindergarten should emphasize coordinating and extending various motor skills, which are basic to all other learning. The need for motor activity in academic learning is essential. Unless motor activity is encouraged in the kindergarten, many learnings will be greatly hindered. Children demonstrate, create, and imitate to the accompaniment of various types of motor activity. Goals for physical development should also include encouragement of good health habits, neatness, and care of clothing.

Goals for intellectual development in the kindergarten curriculum center around development of language patterns. Children need to be taught to talk in complete sentences, use correct pronunciation, and

use correct sentence structure in oral compositions. Also instruction in phonics and number understandings are basic in the kindergarten curriculum. Goals for mental development include developing a worthwhile self-image, adjusting to adults and other children, and feeling a part of the group.

In terms of creative development, the kindergarten curriculum should foster independent thinking and encourage flexibility in ideas and projects. Music and art should be provided to encourage self-expression.

ACTIVITIES AND FACILITIES REQUIRED

The goals of social and physical development are met by activities such as the following: circle time, sharing, singing in a large group, playing group games and talking about stories and pictures. A large space for the children to form a circle is necessary. The children should have space to move about freely. A painted circle or clock is desirable for number activities.

Other activities for the purpose of physical development include riding tricycles, wagons, and scooters, playing in sand, building with blocks, and woodworking. Space for storing and using this large equipment is necessary. The children need to have ready access to this equipment. Blocks need a special storage area, approximately 36 inches high, wide, and deep.

Activities fostering mental and intellectual development include such things as number and word games, puzzles, pegs and pegboards, coloring, and group activities with large charts and chalkboards. Needless to say, storage on shelves is necessary for this equipment, and seating

areas for large groups of children are necessary. Readiness activities in phonics and arithmetic require charts and magnetic bulletin boards.

Correct instruction in letter formation is necessary at this age. Children need to learn to recognize names and read labels. They should have many experiences in hearing and repeating stories.

Creative development can be provided for by activities such as dramatization role-playing in the play-house corner, manipulation of various art materials and media such as paper-mache, finger paint, crayons, pasting and cutting. Rhythm bands, musical expression, and music appreciation also are required in a good program. A piano, dolls, playhouse furniture, and a kitchenette are desirable for pursuing creative activities.

Personal needs must be met by adequate bathroom facilities, storage for resting cots or mats, and a sink in the room. Outdoor recreation facilities separate from those used by other elementary grade children are desirable.

Adequate storage and flexible grouping areas within the room are necessary for a good kindergarten program.

A reading area is necessary for activities concerning the development of language patters and for discussion of books and charts.

Storage for teacher materials needed frequently should be available.

A courtyart with space for planting seeds, playing in a sand pit, and a small pool help achieve both physical education goals and science learning as well as aesthetic features.

PRIMARY PROGRAM

THE NATURE OF THE PRIMARY LEARNER

The primary learner has gained much self-confidence. His sense of reasoning is developing steadily. He is beginning to experiment with his

own interests. He is becoming a self-contained, self-directing, self-motivating person.

The primary learner learns by doing. Learning by doing encourages the use of his mind. Learning that the plant died because of a lack of sunshine will have a far greater impact on the child who experiences this activity than the child who merely reads this fact from a book. This is true in every learning activity.

The child from six to nine is still very active. His attention span is lengthening, but sitting still for long periods of time is an effort. Bodily skills are developing rapidly. He is playing games which require a more exact coordination of large and small muscles. The development of these muscles is a prerequisite to the skills used in writing, reading, typing and playing a musical instrument.

The six to nine year old is developing socially. He enjoys group play. Boys and girls play together but are just beginning to prefer their own sex because of more common interest. Competition is present at play and in organized school activities. Group projects are carried out with great interest.

Through the primary years the child's interests develop from a self-centered world to an interest in his community and its workers, an interest in thepast as well as in the future, and an awareness of faraway lands and the world at large.

He is all this and more. These are some of the ways he and his peers are alike, but each is an individual, and a sound educational program will allow for these differences.

PURPOSE OF THE PROGRAM

The educational program should provide academic instruction in reading, writing, spelling, language, science, social studies and arithmetic. The child should be provided opportunities for the learning, appreciation and self-expression in art and music. He should be provided opportunities for the development of physical skills and creative play. He should be provided opportunities for the development of self-direction, independent learning and learning how to learn.

ACTIVITIES AND FACILITIES

In the primary program the learner will experience various activities throughout the year. Much of the program's potential depends upon the facilities at hand.

The student will be reading independently and in small groups. This requires a library corner including space for phonographs and earphones. An area is needed for group reading. This area should include a black-board, bulletin board, chart holder and flexible furnishings. It is important that some effort be made for the ease of varying group sizes. Dramatizations require a spacious area with bulletin board walls.

The primary learner needs enough chalkboard space so that he will not constantly be waiting his turn. A magnetic chalkboard would aid the teacher in demonstrating and the pupil in participating in the development skills in phonics, numbers and creative expression.

To develop skills in science, a science and a demonstration table are needed. Developing skills in science, social studies and related projects requires map holders, wide counter space and adequate electrical outlets for visual aids.

To pursue activities related to art and music, separate rooms away from the classrooms are needed. The music room should have a raised stage area and should be provided with storage facilities for materials and musical instruments.

A large inlaid circle would allow the students to perform many physical activities in the classroom.

Individual courtyards with trees, grass, and small dividing walls would facilitate grouping, allow for physical activities and be an aesthetic feature.

It is necessary that the outside play area be divided into two sections, one for creative play and one for skill building.

Physical activities require a gym spacious enough and so adequately equipped that many children can participate in various activities at one time.

The traditional school has limited the activities of the primary learner by the lack of adequate facilities. The greatest lack has been space that is flexible.

SUMMARY

1. Instructional supply and resource center.
2. Teachers' workroom (separate for primary).
3. Art storage room.
4. Teachers' toilet rooms convenient to all classrooms.
5. Toilet rooms for each room.
6. Shower and washing machine near the resource room.

UPPER ELEMENTARY

NATURE OF THE UPPER ELEMENTARY LEARNER

Someone has characterized this period from approximately nine to twelve years as the time "when the nicest children often begin to behave in the most awful way". Of course, behavior is not all bad during these years, but it is a trying time for parents and teachers who deal with children of this age and is equally trying for the children. The child is slowly growing out of his dependence upon adults for guidance and direction into a self dependent period, but lacks sufficient experience to make good judgments. As a result, there will be errors which bring about a mixture of good and bad behavior.

At this time when a child is attempting to lean away from so much adult guidance, he enjoys being associated with groups his own age who set up their own standards in the form of clubs. In a classroom situation, the child begins to work with his peers in numerous group activities and on projects related to subject matter.

As their intellectual development increases these children appear to be avid for information not only about their own environment and problems, but for matters well removed from them. They have a great interest in facts and are interested in what things are made of and how they work. Interest in science, invention, and mechanics is likely to reach its heights at this time.

Children's reading interests indicate their concern for reality. Preferences in reading at this level are for factual and scientific material and fiction of a realistic nature. These children seem to have

much curiosity about many aspects of science as they reach the sixth grade. Most children as they begin the upper elementary grades have developed a reading ability which enables them to read for information and enjoyment, and the amount and variety of leisure reading during these years is greater than in previous years. Reading seems to help satisfy some of the zest for adventure among these children and helps them to share the experiences of others far away from themselves both in time and space. The child may use reading as a tool in his search for reality. His ability to read well has much influence on his progress in all subjects.

As the child becomes more proficient in this written and oral work he likes to express his creativeness by writing stories, poems, and skits. He enjoys performing in skits before an audience although some children show signs of shyness.

Through group work in the classroom and through association with others in his own little "club", the child or this age group becomes more aware of and concerned about the ideas and beliefs of others. He begins to contrast the present with the past and begins to be curious about people of the past and their living conditions. He also is very interested in current happenings and enjoys exploring with maps and globes.

Increased muscular development and resistance to fatigue make new skills and activities possible for the child in the upper elementary school. There is increased interest in organized games and the child is willing to practice to increase skills in games such as football, softball, etc. More control over certain muscles makes possible the playing of most musical instruments and improvement in drawing, writing, sewing, etc.

The child of this age has increasing interest in hobbies and is capable of achieving success in activities that require craftsmanship.

The child of the upper elementary grade level is temperamental and may, at times, show undesirable behavior traits, but he is a curious child with an exploring mind who is capable of experimentation and investigation to learn more about himself and the universe in which he lives.

PURPOSE OF THE PROGRAM

It is the purpose of a program for the child in the upper elementary grades (4-6) to help him develop at his own rate of speed both mentally and physically. The program should be a continuation of his education begun in the lower grades expanded to include concepts and subjects appropriate to his age level and capabilities.

The child needs to have the opportunity to gain a better understanding of the world around him and to explore and develop new ideas. Teachers should attempt to give the child a balanced selection of scientific concepts in a spiral progression in grades four, five, and six.

In order for the child to gain a better understanding in all subject areas it is of utmost importance that he increase his skills and abilities in reading and language. A program for the upper elementary pupil must encourage him to read for pleasure and for information on his own, and to help him increase his efficiency in expressing himself in written and oral work. A goal of such a program should be to increase the child's efficiency in creative writing.

If the child is to achieve reasonably near his potential, the physical facilities must lend themselves well. Educators are well aware that there are very few definite answers in our changing society in regard to

programs and methodology. To keep pace now and in the years ahead the physical facilities too must lend themselves to change and adaptability.

There are times and conditions when the child learns under varying circumstances. Individual work, small group work, regular class size, working arrangements, and large group participation are all desirable and necessary if we are to truly educate today's child. Excellent learning situations often take place outside the school building. These learning stations must be available or can be made available easily and quickly. It should be kept in mind that the activities to be performed in each station will naturally be quite varied. Each area should provide for activities that would be included in every aspect of the curriculum.

The competent teacher will have at her disposal the continuing assistance of the services provided by modern technology. These services range from chalkboard design to the utilization of electronic equipment. Again these services will be provided in the best interest of the learning child whether individually or collectively. Facilities are required for the utilization of these services.

The modern teacher will need a study and preparation area where tools, materials, and teaching aids are available. This area, as well as each teaching station, must provide for adequate utilization and disposition of supplies and equipment whether school property or personal belongings.

Effort should be made to attune aesthetic value to an educational environment. A wholesome educational environment will take into account the mental as well as the physical comfort of the child.

A child of this age group is becoming aware of the world in which he lives in relation to other nations, other races, and other customs. At this time, he should be given the opportunity to investigate the various people

who help make up the population of the world, both those who are near neighbors and those of other continents. In social studies classes he should acquire and use the abilities and skills essential in intelligent co-operative participation in group activities.

The purpose of the mathematics program is to extend the concepts already acquired in the lower grades in the art of dealing with numbers in order that the child will become proficient in the use of the operations of arithmetic. He should be taught to draw conclusions from known facts and to apply his knowledge of mathematics in the everyday use of numbers.

At the upper elementary level the child has developed sufficiently to take part in an advanced art program and to be introduced to musical instruments. The purpose of such an art program is to make the child aware of the beauty around him and to give him some artistic experiences. A good program of music instruction should give the child the opportunity to participate in a band or an orchestra and to help him enjoy music by both listening and singing. It should give him an introduction to music fundamentals and the experience of taking part in programs.

A physical education program should be designed to encourage the child to learn to take part in group activities thus helping him get along well with his peers. It should help him develop an understanding of fair play and to become proficient in physical skills. Checking the child for physical defects and introducing him to formal health and first aid instruction are vital parts of a physical education program.

ACTIVITIES AND FACILITIES REQUIRED

In upper elementary science, experimentation is a vital part of the program. The child needs the opportunity to investigate and experiment

on his own and as a part of a group. This also enables him to become familiar with science equipment and the use of such equipment. In a school which houses the fourth through the sixth grades a space is needed where experiments of various kinds can be performed and space is needed for the safe storage of science equipment. In connection with the study of nature, observation trips to the yard are made. An outside door leading to a patio, yard, or wooded area would be desirable. As films, slides, filmstrips, etc. are used in this class, provision should be made for darkening the room. Ample electrical outlets for this equipment are needed.

In language arts classes, producing plays, reading to a group, and giving talks are parts of the program. Movable walls would enable the sharing of dramatic performances, readings, talks, etc., with another class without necessarily moving the classes to an auditorium. Group work in reading and individual reading are done in the upper grades, so a room suitable for dividing the children into groups is needed as well as one that has space for individual work. An outside door leading to a patio or courtyard would offer a place outside in good weather for independent reading either for information or enjoyment. In a language arts program films and records are used to give the child further instruction and advantages so provisions for darkening and soundproofing the classroom are important.

Social studies projects are a definite part of the program. This necessitates an area for group work, adequate bulletin boards, and areas for displaying the projects. In order to give the child a better understanding of the world, both past and present, audio-visual materials

are used. Provisions for darkening and soundproofing these classrooms are important. Permanently mounted individual classroom screens for films, slides, and filmstrips save wear and tear on screens which tend to show signs of wear more rapidly when they are carried about from room to room. As reports are a part of the social studies program it would be of convenience to the student to have the social studies room located near the library where he may go for research. The classroom should have facilities for committee and small group work. Social studies classes give dramatic presentations portraying the way of life of peoples in history and in other countries of today. Movable walls for sharing these presentations with other classes are desirable. Facilities for hanging maps and a space for the storage of unused maps are needed.

The mathematics program is designed to introduce and increase the understanding of the addition, subtraction, multiplication, and division of whole numbers, fractions, and decimals and the application of these to story problems and real life experiences. For this, ample glare-free chalk boards are necessary. Space for group work with concrete examples of fractions, geometrical shaped objects, and liquid and dry measures is necessary along with the storage space for these aids.

In the teaching of art appreciation seating facilities for lectures and films are necessary. Provision for the showing of films, slides, and filmstrips should be made. To give the child experience in painting, sketching, cutting paper, and working with clay, a special room with an art storage area adjacent is essential. In this room, the child would have more room in which to work and express himself than he would normally have in a regular sized classroom. An outside door would be used for going out-of-doors to sketch.

A large soundproof room is necessary for a group of children to participate in music where listening to records and taking part in group singing are a part of the program. In this room there should be a glare free chalk board to be used in teaching music symbols suitable for grades four, five and six. As a part of the musical training, the child enjoys folk dancing and taking part in musical programs. This calls for an area suitable for the practicing and producing of these programs. As instrumental music is introduced in these grades, a place for large and small group rehearsals should be provided.

Physical education in the upper elementary grades requires space for participation by the student in games of various kinds. In order to carry out this aspect of physical education, a regulation size gymnasium and a covered outside play area are needed. A seeded area is essential for games like football and softball which become very important to the child of this age group. A physical education instructor needs a place to conduct physical inspection and to give instruction in health and first-aid. He needs storage space for playground and gym equipment, scales, eye charts, mats, etc.

In many classes in the upper elementary grades, exhibits and fairs are held to display the work done by the child. Additional display areas are needed for these projects.

A trend in modern education for the elementary grades is team teaching. Because one teacher may have greater knowledge of a particular aspect of his field, he may, at times, teach more than one class, thus freeing other teachers for individual work with certain children. In order to carry out this concept in teaching, movable walls may be used

to create a space of greater size to accommodate a group larger than is ordinarilly found in one classroom.

Another new trend in many subject fields is the use of educational television in the classroom. Provision should be made for necessary television sets throughout the building..

It is suggested that the teaching stations for the upper elementary grades be planned in units of four or six in rooms or spaces. One half of these spaces should be planned for an emphasis upon the teaching of science and mathematics. One half should be planned for an emphasis upon the teaching of language arts and social studies. It should be understood that the teaching in these spaces will not be limited to either math-science or language arts-social studies. All spaces should provide for the total elementary classroom program except for the special emphasis. In so far as possible all special equipment should be movable so that the emphasis may be changed as the program develops. It should be possible to rearrange space to accommodate large groups (up to 100 pupils), medium-sized groups (15-30), small groups (2-15) and individuals working alone.

ADMINISTRATIVE AREA

The administrative area of a school building is, in effect, the "front door" of the school. It is in this area that teachers, pupils, parents and other interested citizens of the community often make their first contacts with the school. First impressions tend to be lasting impressions. Therefore, the general atmosphere of this area may well have an influence upon the attitudes people develop toward the school.

The general atmosphere should be conducive to warm and friendly human relationships. At the same time, it should be obvious to all who enter the area that this is the point from which the total operation of the school is directed.

Perhaps there was a time when the strict enforcement of discipline was considered to be the major function of the administrative personnel of a school. Administrative personnel still have to be concerned with discipline, but the concern is directed more toward helping pupils develop self-discipline than toward administering assorted punishments for the infraction of rules. Efforts are directed toward helping pupils understand the reasons for standards of conduct and toward inspiring, rather than forcing, pupils to become participating members of their school.

The trend toward employing, as a part of the elementary school staff, guidance counselors and school psychologists has done much to further the idea that a part of the role of the school is to help young people understand themselves; comfortable surroundings in which young people can feel "at ease" are essential to accomplish this purpose.

The administrative area should be located so that it is easily accessible from all parts of the building and from the main entrance.

The following spaces should be provided in the administrative area:

1. Reception space

This space should be large enough to accommodate 12 to 14 people when necessary. As a general rule there probably will be no more than

6 to 8 individuals in the reception area at one time, but there will be numerous times, such as during the registration of pupils, when the large number will have to be accommodated. Mail boxes for teachers and a bulletin board for general announcements should be provided.

2. Secretarial work space

It appears that initially one secretary will be employed. In view of the current emphasis upon relieving teachers of much of the clerical work they now perform it appears quite likely that work space eventually will be needed at least for an additional person. Because the secretary also will serve as the receptionist this area should be planned as an extension of the reception area. It is suggested that consideration be given to separating the two areas by a work counter. Space should be provided for 10 to 12 four-drawer file cabinets. Machines such as the mimeograph and spirit duplicator should be located in a separate room immediately adjacent to the secretarial work space. This room also should serve as the storage room for office supplies, mimeograph paper, duplicating fluid, etc. A glass panel should be provided between the secretary's office and the mimeograph room so that she may "keep an eye on the office and reception area" at all times. A vault should be provided for the storage of permanent records.

3. Principal's Office

It should be possible to enter the principal's office from the reception area without passing through the secretarial work space. A private entrance to the office also should be provided. The principal's office should be large enough to accommodate the usual office furniture including at least 100 linear feet of book shelves. Space should be

provided to accommodate a conference of up to 6 people.

4. Assistant Principal's Office

The assistant principal's office should be very much the same as the principal's office. A connecting door between the two offices is desirable.

5. Clinic

Adequate space should be provided for physical examinations for first-aid treatment or minor injuries Two small rooms (one for boys and one for girls) where children who become ill at school may wait until parents come for them or until they can be taken home should be provided. Each room should be large enough to accommodate two cots. A small toilet room for boys and a small toilet room for girls are necessary.

6. Offices for Guidance and Psychological Services

Although these offices should be planned as a part of the administrative area and should be planned so that the occupants have easy access to pupil records, the main entrance to these spaces should be separate from the main entrance to the administrative offices. The offices for guidance and psychological services might share a small waiting room sufficient in size to accommodate 4 or 5 pupils waiting for conferences.

Four small offices will be required, for much of the work in these offices will consist of conferences with individual pupils. At times it will be necessary to confer with a pupil and his parents. It appears that space should be provided in each office for a conference of four people. It is anticipated that two offices will be occupied by guidance counselors, one by the school psychologist and one by the visiting teacher. A small storage room will be required.

7. Conference Room

A conference room which will accommodate conferences of up to 12 people should be provided in the administrative area. This room should be located so that it is easily accessible to both the administrative and the guidance personnel.

8. Toilets

A toilet room for men and one for women should be provided as a part of the administrative area.

9. Outside Telephones and Inter-communication System

Provisions should be made for equipping each office with a telephone. All incoming calls should be channeled through the office of the school secretary. It should be possible to originate outgoing calls from each of the offices without having the school secretary place the call.

Intercommunication between the office and each teaching station should be provided. A telephone system by which the principal may call any teaching station or any combination of teaching stations is considered preferrable to the "squawk-box" type of system.

GENERAL FACILITIES

In this section of the report an effort has been made to cover those spaces which will be used by the entire student body of the school. In addition, an effort has been made to specify certain items which should be common to the entire building.

FOOD SERVICE

Food service is an integral part of the educational program in Charlottesville. Not only does the cafeteria program provide each pupil

the opportunity for a well-balanced lunch, it provides the school with the opportunity for teaching many things ranging from good table manners to the importance of a proper diet for growing boys and girls.

It is anticipated that this school plant eventually will house 600 to 800 pupils. Therefore, the dining area should be planned to seat approximately one-half of the maximum anticipated enrollment, or it should be planned so that it may be enlarged to the desired maximum size at a later date. Because of the expense and the difficulty in moving fixed kitchen equipment it appears that it would be economical to design the kitchen for the maximum size even though the maximum amount of kitchen equipment would not be installed initially.

In addition to the usual planning for easy and efficient traffic flow, attention should be given to designing the dining area as a pleasant and attractive place for eating. There is no educational reason for the dining area to be designed as a single large room. Two rooms or one room that could be divided by a movable partition might offer many advantages both from the standpoint of creating a pleasant atmosphere and from the standpoint of the multi-use of space . With reference to the multi-use of space, the dining area or areas should be designed so that they may be used for large-group activities before and after the lunch periods. Although some teachers may eat with the pupils each day, it is not anticipated that every teacher will do so every day. A small teachers dining room to accommodate not more than 15 people at a sitting is desirable.

The kitchen should be planned for efficient food preparation and serving. Because there is little, if any, central cafeteria storage in

Charlottesville, storage areas should be larger than those usually planned for an elementary school. A large, vermin-proof storeroom for canned foods, flour, sugar, and other non-perishable food will be required. A large, walk-in freezer will be required for the storage of frozen foods. A large, walk-in refrigerator for food also will be necessary. Other required facilities are as follows: office for the cafeteria manager, locker room and restroom for employees, utility closet for cleaning equipment, and a room in which filled garbage cans may be placed until they can be emptied. This room should be located for easy access both from the kitchen and the service driveway. A hose connection and a floor drain are essential for the garbage can room. Floor drains in the kitchen will be an aid to the proper cleaning of that area.

Floor and wall surfaces in the kitchen and in the dining area should be such that they promote cleanliness and sanitation. A separate mechanical ventilation system should be provided for the kitchen.

AUDITORIUM

An auditorium large enough to seat at least one-half of the student body is an important facility for any elementary school plant. Experience has shown that the functions of an auditorium cannot satisfactorily be combined with either the cafeteria or the physical education spaces. Although auditorium seating must be large enough to accommodate adults, the designers should keep in mind the fact that children will use this space more than will adults. It is especially important that the stage be designed with children in mind. Elementary school children usually perform in groups. Therefore, the stage should be large enough

to accommodate at least thirty children at one time. A storage room for stage equipment and props will be required. A dressing room for boys and one for girls should be provided. Toilet rooms should be easily accessible from each dressing room. In many instances the dressing rooms will serve more as areas where 10 to 15 pupils assemble and wait to go on the stage rather than as dressing rooms per se.

PHYSICAL EDUCATION SPACE

It appears that the typical indoor physical education space in many elementary schools has been patterned after the typical high school gymnasium. This has meant that the space was planned primarily for the game of basketball. At certain periods of the year basketball may be a desirable activity for some of the pupils in the upper elementary grades, but it seldom is an important activity for many pupils in grades K-4. The indoor space for physical education for an elementary school should be designed for games and activities in which groups of 30 or more pupils can participate. One part of the area should be designed for body building and correctional exercises. The flooring materials should be such that it can be used by pupils wearing any type of safe footwear. A non-skid, easily-cleaned floor is desirable. The flooring material should be such that the primary emphasis can be upon physical education rather than upon avoiding marks on the floor. Older pupils usually are required to dress for physical education classes. Dressing rooms complete with lockers and showers should be provided for their use.

Consideration should be given to providing a covered allweather playing area which can be used throughout the year for physical activity. A "play-shed" located at a side of the building where it will be sheltered from the winter winds would be of tremendous value to the educational

program. Such an area would be in addition to the indoor, physical education space.

A part of the site should be developed for organized play. Separate areas should be provided for younger and older pupils. Part of the site should be developed for unorganized play. A special area should be developed and equipped for creative play by the younger pupils.

THE LIBRARY

Today's concept of a school library is a changed one, continually expanding, from the traditional idea of a book depository to an instructional or learning materials center, an instructional media center, a resource center, or even a teaching laboratory. Many people still prefer the term "library" because, regardless of what it is called, it is still the source of materials representing knowledge, whether reached through reading, viewing, listening, or some combination of the three.

Purposes of the school library include: participating in the school program in meeting the needs of the school community, providing materials and services appropriate and meaningful in the growth and development of boys and girls; stimulating the desire to learn and satisfaction in acquiring knowledge; using library experiences to develop interests, make adjustments, and develop desirable attitudes; developing discrimination in using printed and audio-visual materials; stimulating interest in libraries in school and in the community as a means of continuing education and growth; providing through selective work with teachers materials of all kinds that contribute to the teaching program; providing the means of individual and group studying and research; providing library instruction, service, and activity throughout the school.

The physical environment needed to effect such a program is an extremely important factor. The library must be easily accessible to students and faculty. It should be attractive in appearance, comfortable, friendly, and inviting. It should have good lighting, pleasant color, and well-chosen furnishings arranged for use and beauty, including carpeting.

Adequate space, as outlined in the American Library Association's STANDARDS FOR SCHOOL LIBRARY PROGRAMS, is required to develop and promote a good library program. (See the Appendix). Provision must be made for a large reading room, conference rooms, a workroom with storage provisions, a librarians office, an audio-visual previewing and listening room, an audio-visual storage center, a reference area, a special area for kindergarten and primary boys and girls, an informal reading and browsing area with colorful comfortable chairs, tables, etc., an area for a few carrels for individual study, space for adequate low movable shelving, and an area for professional materials.

A library classroom adjoining the reading room can be of great value to teachers, students, and librarians. Consideration should be given to a teacher resource and workroom adjoining the library. An open court accessible from the library where flowers and nature give charm will add much to the library atmosphere. Stone benches can provide seats for outdoor study.

ACCESS AND PARKING

Access and parking facilities should reflect attention to aesthetic appearance, practical arrangement, and maximum safety precautions. Consideration should be given to a wide access area from the street, possibly with a wide one-way driveway (with at least two lanes) to the building.

which will not cut across or endanger walkways, play areas, loading or parking zones, and which will in no way become a throughway.

Plans should provide for a bus-loading zone out of traffic, preferably at the sheltered play area. These plans should provide also for sheltered pick-up loading and unloading zones for parents adjacent to the building.

A separate service area driveway should be provided. The delivery area should be on the ground level away from the traffic area. Bicycle racks require convenient safe quarters away from traffic.

Two parking lots could provide separate facilities for school personnel and for visitors. These should be safely away from areas for play, loading, and walking. All parking areas should be well-lighted.

FURNISHINGS

All furnishings in an elementary school building should be designed to contribute to an attractice setting for a child's activities. Such furnishings should be colorful and light, durable, practical, and easy to clean.

Flexibility should be the keynote to furnishings wherever possible, with movable furniture adaptable to the age and size of students and to the specialized activities involved (such as special education, kindergarten, science, foreign language, art, music, library, et cetera). Homelike and attractive furnishings are especially needed for the special education and kindergarten quarters, with proper attention to the areas needed for particular activities. Provision should be made for some means of observation for both the kindergarten and special education

facilities, such as cable and/or other connections for television.

LIGHTING AND COLOR

Proper lighting and color are of primary importance in creating a desirable educational environment. An adequate level of shadow-free, glare-free lighting will be required throughout the building. The proper use of colors is, of course, an important factor in achieving the balanced brightness required in the modern school building. Either natural or artificial lighting may be relied upon as the primary source of light so long as the light within the various spaces can be controlled. It is desirable that the control of light, whether natural or artificial, be as automatic as possible. Busy teachers seldom remember to manipulate shades, blinds and other lighting controls at the proper time. Even if windows are not provided as a primary source of light, it is desirable that they be provided so that the occupants of the building may "see out" and for visual relief. Interior glass panels also may be used to provide visual relief. Proper control of lighting for the use of audio-visual and visual materials is essential. In all instances precautions should be taken against the danger of pupils walking, running or falling into panels of glass.

THERMAL ENVIRONMENT

The thermal conditions which are maintained within a building have a decided effect upon the health, and the efficiency of those who work in that building. Temperature, air movement and humidity should be controlled automatically either on an individual room basis or by zones. Year-round climate control or air-conditioning is a fairly common pro-

vision in new elementary school buildings in Virginia. Cooling is needed during several months of the regular school year. In view of the trend toward year-round use of school buildings cooling is even more desirable than it has been been in the past.

ACCOUSTICAL ENVIRONMENT

A school can be a "noisy" place. It is desirable that each area of the building be provided with the proper accoustical treatment for the activities which will take place in those areas.

STORAGE

Few school buildings have sufficient storage space. At least the following will be required in this building:

1. Central Storeroom for Books

This room should be located near the administrative area and should be sized for summer storage of textbooks. A section of this room might be designed for use as a school store where paper and pencils may be bought by pupils.

2. Storerooms for Instructional Materials (Teacher Work Room and Resource Room)

It is suggested that instructional materials be stored near the areas in which they will be used. If this is done a minimum of two rooms will be required. It is predicted that the tendency toward providing for teachers in the elementary schools a duty-free work period or planning period will continue. If this is the case, teachers need some place where that period can be used profitably. It is suggested that the place where

instructional materials are stored be planned as a teacher workroom where teachers can plan and develop instructional units during their planning period. Because not more than 20% of the teachers would have a planning period at a given hour, it would not be necessary that such a room accommodate more than 3 or 4 teachers at any one time. Thus, three or four work tables or desks would be sufficient, provided that adequate cabinets or shelves are available for any unfinished projects that might need to be left in the room. It might be that the teacher's lounge could be planned in conjunction with these rooms thus making what often is a seldom used central facility more useful to teachers.

3. Custodial storage

At least one janitor's closet, complete with utility sink, rank for mops and brooms and shelves for supplies, should be provided in each part of the building. In the case of multi-etoried construction, it is essential to have a janitors closet on each floor of each wing of the building. A central storeroom for storage of custodial supplies should be provided. Nearby should be a small office, toilet, locker and dressing room with a shower, a small workshop for minor repairs to furniture and equipment should be provided.

A storeroom for a lawn mower and lawn tools should be accessible from the outside of the building only.

TEACHERS' LOUNGE

Teachers need a place where they can rest and relax for a few minutes as the schedule permits. If this type of space can be provided in conjunction with the teachers' work rooms as suggested above, there will be no need for a separate lounge.

RESOURCE ROOM

A resource room with a floor area of about 1200 square feet should be provided. One section of the room should be furnished with home-type kitchen equipment including kitchen range, refrigerator, sink, work counter, work tables, clothes washer and dryer. One section of the room should be equipped with work benches and hand-tools for small wood-working projects. A small, home-type bathroom, complete with tub and shower, should be provided adjacent to the resource room.

The resource room will be used for a variety of projects which are important to the instructional program for pupils of all ages but which cannot be carried on at the regular teaching stations. For example, the study of foods and nutrition can be much more meaningful if pupils can participate in the preparation of certain food or perhaps prepare a simple meal. The workshop area will be used for the construction of items directly related to the program of instruction. The bathroom will be used in the teaching of hygiene and personal grooming. From time to time there is a definite need for a place where children from homes with inadequate facilities can take a bath.

TEACHERS' TOILETS

Toilet rooms for both men and women teachers should be located convenient to all teaching stations. Small toilet rooms in two or three locations are preferred to larger toilet rooms in a central location.

DRINKING FOUNTAINS

A member of chilled-water drinking fountains should be located throughout the building. Outdoor, frost-proof drinking fountains should be located near all play areas.

PLUMBING FOR INSTRUCTIONAL AREAS

Each classroom or teaching station should have available a sink with warm and cold water. Care should be taken to assure that the warm water can never become hot enough to injure a pupil. A drinking fountain should be provided in each instructional area.

PUPIL TOILET ROOMS

Large gang-type toilet rooms should be avoided in any elementary school building. Such rooms are the sources of many discipline problems and often are costly from the standpoint of maintenance. It is suggested that one small toilet room for boys and one small toilet room for girls be provided between or adjacent to each two teaching stations. These toilet rooms should be the counterpart of the home bathroom to be used as the need arises without the necessity for asking permission or for lining children up to "go" whether they need to or not.

These small toilet rooms should be planned for easy cleaning and should be well ventilated - preferably on a forced ventilation system separate from that of the remainder of the building.

MISCELLANEOUS INTERIOR PROVISIONS

The interior of the building should be designed to create a pleasant, attractive atmosphere for learning. The "tunnel effect" of long, tile-lined corridors should be avoided. The typical corridor bulletin boards usually are most unattractive. It is hoped that wall surfaces will be of a material which is durable and easily cleaned but which can be used for the display of pupil work as needed. Consideration should be given to the use of murals and attractive designs for at least some of the wall surfaces throughout the building.

BELL SYSTEM

It is not anticipated that this school will be operated by bells that ring every hour or so. Nevertheless, a bell system to signal the opening and closing of school and, at times, other events will be required. The bells should be controlled by a clock in the central office. The system should be such that the bells can be programmed to meet the needs of any type of schedule which may be developed in the future.

FIRE PROTECTION

An adequate number of fire extinguishers to meet city and state codes should be provided at the appropriate places. Recessed locations for fire extinguishers are preferred.

A fire-alarm system with alarm boxes located throughout the building should be provided. This system should be separate from the bell system used to indicate the opening and closing of school.

PROTECTION FROM VANDALISM

The entire exterior of the building should be lighted at night by floodlights controlled automatically by a time clock or a photoelectric device.

Care should be taken in the exterior design of the building so that it will not be easy to gain access to the roof without a ladder. Secluded nooks and alcoves around the exterior of the building should be avoided.

HOSE CONNECTIONS

A number of hose connections should be provided around the outside of the building for watering lawn and shrubbery. If interior courts are provided, each should have a hose connection. Care should be taken to protect all exterior hose connections against freezing.

FLAGPOLE

A flagpole should be provided near the front of the school. The flagpole should be designed so that it can be lowered for painting and for replacing the rope or chain as necessary.

FLOORS

Flooring materials should be selected for function, comfort, ease of maintenance and economy. There is no educational reason why the same flooring material should be used throughout the building.

EDUCATIONAL TELEVISION

It appears likely that both open and closed circuit television will be used in this building at some future date. Conduits should be installed so that both types of television may be used in all instructional areas in the future.

ELECTRICAL SERVICE

No one can predict the extent to which electronic aids will be used in future instructional programs. A minimum of 4 duplex electrical outlets should be provided in each instructional area. It should be possible to add more electrical outlets as needed.

CLOCKS

Each teaching station should be equipped with an electric clock, but there is no necessity for these clocks to be connected to a master clock.

PAY-TELEPHONES

At least two pay-telephone stations should be located at points in the building where they are readily accessible.

SPECIAL EDUCATION

SPECIAL EDUCATION FOR THE EDUCABLE CHILD

The educable mentally retarded child is normal for a child of his chronological age in physical development, level of physical activity, and interest level. He typically possesses an intelligence quotient between fifty and seventy-five and learns at a rate which is one-half to three-quarters that of the normal child. He is prone to all the behavior disturbances and physical disabilities which may effect a child or normal intelligence. He is frequently handicapped by cultural deprivation and the lack of experience and motivation which accompany it. He often acts from a background of frustration and failure resulting from his intellectual limitations. His attention span is short, and he is easily overwhelmed or distracted by excessive stimulation. His ability to think abstractly

is impaired. He does not readily generalize from past experience to a new situation. He requires much concrete experience in his learning situations and much varied repetition. Before leaving school at age sixteen or beyond, the educable mentally retarded child can be expected to learn academic skills at a third-grade level or beyond. He can be expected to learn social skills and personal adjustment sufficient to enable him to be a self-supporting and independent citizen functioning in unskilled or semi-skilled labor.

He is best educated in a class numbering no more than sixteen members, and containing an age range no greater than three years. Common groupings on the elementary level are primary classes (ages 7-10) and intermediate classes (ages 10-13). The major goals of the primary class are development of readiness for academic learning, good habits of health and safety, self-confidence, and social skills. In the intermediate class the goals become the development of skill in tool subjects (reading, writing, and arithmetic), social skills involved in community living, and personal adjustment to future life experiences. The tool subjects are meant to be acquired not as an end in themselves, but as a necessary part of the development of social competence, personal adequancy, and occupational suitability. The educable retarded child can share in the art, music, and physical education activities of normal children his own age, because he does not differ from them in such abilities. His classroom should be located to so that he has easy access to areas where such activities take place. Easy access to cafeteria should also be considered, since this is another place where this child can associate with his chronological peers. Such easy access is necessitated by the child's short

attention span and distractibility. He can be disturbed more readily than can a normal child, by necessary movement through the halls and change of environment; yet such movement is advisable when the goal of social adequacy can be obtained through experiences with normal children.

Paradoxically these same problems, short attention span, distractibility, along with the necessity for concrete experiences and an activity curriculum, tend to create a higher-than-normal noise and movement level in a special class. Behavior disturbances may be extended outside the classroom setting. For these reasons the classroom should also be as sheltered as possible from other classrooms, without being isolated or too far from activity centers mentioned above. A first-floor location would prevent noise and movement from bothering people below and would facilitate matters for any physically handicapped children, as would an exterior access directly from the room. Such an exit would also eliminate one more trip through the halls for outdoor activities, such as recess, and would reduce fire hazards for children who are slower than normal in learning such routines as fire-drills.

Low frustration level, cultural deficiency, and distractibility all tend to create a frequent need to isolate a child who is upset by the classroom situation. This can be accomplished by providing some small sheltered area within or attached to the classroom where one child may be placed, where he is not able to see the rest of the room, but can be observed by the teacher.

This same distractibility, coupled with the need for many and varied concrete experiences and cultural enrichment, presents another challenging paradox. The room must be equipped with much storage space, where materials

can be kept out of sight, yet readily available. For the same purpose, much display space is needed, in the form of tables, shelves, boards of varied materials, chalkboards, peg boards, tack boards, and the like.

The need for concrete experiences and varied repetition requires the use of many audio-visual aids. Thus, many well-placed electrical outlets are required. Tape-recorders, projectors, record players, language masters, teaching machines, and the like are used frequently. Individualization of instruction may mean that several of these machines are operating at the same time.

Many concrete materials, such as clay, sand, paint, liquid measures, food preparation, etc., require an adequate water supply in the classroom. Toilet facilities should also be readily accessible. Movement out of the room to a toilet is distracting to the child, and deprives the teacher of many excellent opportunities to develop good health habits.

Since instruction is as individualized as possible, classroom space should be organized so that there is not only room for all sixteen children to act together, but also additional room organized for small-group and individualized work, slightly isolated from the larger group.

The three-year age range in the class should be reflected in the size and height of tables, shelves, and the like. Storage space should be accessible to the child; thus there should also be provision for locking or prevention of such accessibility when desirable.

Equipment for which storage space and outlets and screening should be provided:

tape recorder
film strip projector
movie projector

language master
earphones
hotplate
jig saw
overhead projector
opaque projector
toaster
electric fry pan
refrigerator unit
kiln
tele-trainer
charts and chart racks

SUMMARY PLAN CONSIDERATIONS

Classrooms must be on ground level; all other architectural barriers to handicapped students should be eliminated.

Classrooms should be larger in size than regular size classrooms to permit a variety of learning activities. Two classrooms with common storage, lavatories and other common use space would be equivalent to three normal classrooms.

Storage within and adjoining classrooms should accommodate all daily needs of students and staff, utilizing movable storage cabinets and closets.

Observation of classroom through one-way mirror or closed circuit television (with video tape) would provide maximum use of facilities for training, psychological evaluation of students, and evaluation of educational program by staff.

DESIGN CONSIDERATIONS

A classroom should be versatile so that it can be divided into two, three and four activity areas through the use of light movable partitions and furnishings which do not present non-desirable visual barriers for the staff. Such activities would include academic study, informal learning, kitchen experiences, crafts, arts and others. Floor coverings should have

variation to include one of the activity areas with carpeting.

Kitchenette area should be included in classroom in one of the following manners:

a) exposed in room
b) recessed behind folding door or partition to be closed when not in use
c) as common space between two classrooms with adequate visual barrier, i. e., drapes in front of glazed wall which could shield off one classroom while maintaining visual observation from the other classroom.

Shop area to house small tools and measuring devices should be included in classroom with similar considerations given to kitchenette area above.

Isolation areas should be provided in each classroom. These areas should be collapsible or folding in nature so as not to consume valuable floor area when not in use.

Storage should include:

a) open storage for active student projects involving day-to-day work

b) closed storage for materials accessible to students

c) closed storage for materials used and/or distributed by staff.

Classrooms should readily accommodate audio-visual aids.

Outdoor classroom space should be directly accessible from classroom and should include such areas as sheltered play area, garden(s), sandboxes, and other such play area and equipment suitable for supervised activities as part of the educational program.

SUMMARY

In the survey report prepared by the Division of Surveys and Field Services of George Peabody College for Teachers it was recommended that this plant initially include 12 classrooms for grades K-4, 2 kindergarten rooms and 1 special education room. That recommendation was based on the assumption that kindergartens would operate on half-day sessions.

A regulation recently adopted by the Virginia State Board of Education states that kindergartens shall operate for a full day of approximately 5 hours. Thus, the number of kindergarten rooms must be increased from 2 to 4. The special education section of the Peabody report includes the statement that facilities for the educable mentally retarded always should be planned in units of two classrooms. The special education section of this planning report includes the stetement that these children usually are divided into primary classes for children age 7-10, and intermediate classes for children age 10-13. Thus it appears that 2 rooms will be needed for special education.

One of the major reasons for constructing this plant is to relieve overcrowded conditions at Clark and at Johnson schools and to leave rooms at those schools which may be used for kindergarten classes. In view of the State Board of Education ruling concerning the length of the school day for kindergarten children, the number of kindergarten rooms at Clark and at Johnson must be double the number (2 each) recommended in the Peabody report. Thus, 4 additional classrooms will be needed at the new school to provide the necessary relief for Clark and for Johnson.

In light of the factors explained above it appears that,

initially, the new plant should house 16 elementary teaching stations, 4 kindergartens teaching stations and 2 special education teaching stations.

Because it appears that Charlottesville will not be able to move immediately to the K-4 organization for elementary schools, this plant probably will house grades K-5 for several years. Instructional facilities must be designed with this fact in mind, but at the same time the designers must recognize that according to present indications the plant eventually will house grades K-4. With this in mind it is suggested that items such as cabinets and work counters which will vary in size according to the age and size of the pupils be planned as movable units. If this is done, these items can be transferred to another building with the older children and can be replaced with items suitable for younger children who will remain in the building.

It is suggested that teaching stations be planned in units of 4 or 5 in such a way that each unit may be used as an ungraded school-within-a-school. In other words within each unit of 5 teaching stations, 5 teachers would work with 125-150 pupils ranging in age from 5 to 9 years. The units should be designed so that at times the pupils could be divided into groups of 20-30 to work with individual teachers. At other times it should be possible to create a space in which one or two teachers could work with up to 100 pupils while the remaining teachers work intensively with small groups. It is desirable that the pupil identify himself with the unit or little school rather than with a room within the unit. It appears that such identification is

essential to the free movement of pupils within the ungraded situation. In the typical elementary school building which is divided into relatively isolated compartments called classrooms, pupils often become so attached to a particular room, teacher and group of pupils that the move to more appropriate group becomes almost a traumatic experience which negates the advantages of the ungraded type of organization.

The special education teaching stations should be planned as a unit related to the other instructional facilities as described in the special education section of this report.

In view of the fact that the housing of the 5th grade at this school is considered to be a temporary measure until the middle school can become a reality, it may be that one unit of 5 rooms should be equipped to house 4th and 5th grade pupils. Nevertheless, the designers should keep in mind that within a few years that unit will be used for the K-4 ungraded plan. During this interim period it appears that perhaps each of 3 units of the school might house an ungraded group of 5,6,7, and 8 year olds, while one unit might be used to house a group of 9 and 10 year olds. It should be repeated that the unit used initially for 9 and 10 year old pupils will be used in the future for pupils ranging in age from 5 to 9 years. In terms of the amount of space provided, this should pose no problem if the designers remember that the spaces to be used by the 9 and 10 year old pupils should not be reduced in size as often is the practice in the conventional elementary school building.